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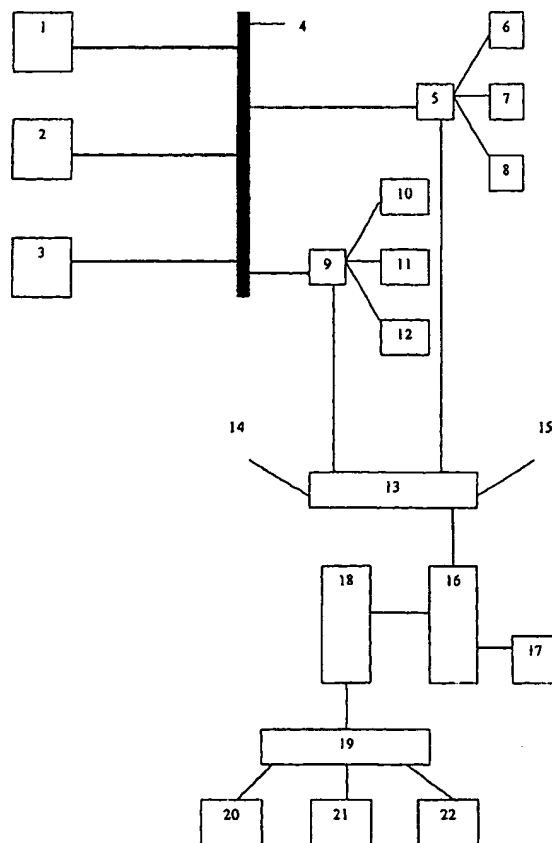
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(54) Title: ENERGY CONSUMPTION MONITORING



(57) Abstract: A system for analysing energy usage on a network, such as an electricity network (4) which includes a number of energy sources (1, 2, 3) and a number of energy consumers (6, 7, 8, 10, 11, 12) the system including a plurality of meters (5, 9) on the network which monitor energy usage on the network at intervals throughout a day, the meters supplying data to data processing apparatus (16, 17) which aggregates the data so as to provide an indication of current total energy usage, and which stores data so as to permit the retrieval of historical energy usage for predetermined intervals on days of the year, wherein the data processing apparatus further compares current total energy usage for a particular point or period of time in the year with average historical total energy usage for that point or period of time, and generates an index which indicates the difference between the average historical energy usage and the current total energy usage. A period of time is taken for data to be received from all of the meters (5, 9), and once the data has been received from all of the meters and aggregated, subsequent aggregate totals are calculated at intervals substantially shorter than said period of time using the latest data received from all of the meters. The index can be used to reduce the financial effects of imbalances in a network in which retailers contract for the supply of energy from energy producers. In such an arrangement, the retailer's own demand error is calculated using the commonly applicable index by producers and retailers, to give an indication of the degree of imbalance in the market. Financial derivatives can be used to hedge the financial consequences of imbalances.